

CLAIMS

- 1 1. A method of controlling the drilling of wells under pressure,
2 comprising the following steps:
 - 3 a) providing a principal drill string in a principal wellbore;
 - 4 b) providing at least one concentric casing string surrounding at
5 least a portion of the principal drill string in the principal wellbore;
 - 6 c) pumping a controlled volume of fluid down the at least one
7 concentric casing string and returning the fluid up a common return
8 annulus in the principal wellbore, so that the friction caused by additional
9 fluid flow up the return annulus is greater than the friction caused by the fluid
10 flow from the principal drill string to frictionally control the well .
- 1 2. The method in claim 1, wherein there may be included a
2 plurality of concentric casing strings.
- 1 3. The method in claim 2, wherein the fluid flowing down the
2 plurality of concentric casing strings and returning up the common return
3 annulus defines a frictional component within the system which restricts the
4 return fluid flow to control the well.
- 1 4. A method of drilling oil and gas wells under pressure, utilizing
2 hydraulic frictional controlled drilling, comprising the steps of:
 - 3 a. providing at least one concentric casing string to define an
4 plurality of annulus;
 - 5 b. injecting fluid down some the annulus;
 - 6 c. returning the fluid up at least one return annulus so that the
7 return flow creates adequate hydraulic friction within the annulus to control
8 the return flow within the well.
- 1 5. The method in claim 4, wherein the oil and gas well may be a
2 straight, directional or multilateral well.

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1 6. A system for controlling fluid flow within an oil and gas well
2 under pressure, which comprises:

- 3 a. a first drilling string defining a first annulus therein;
- 4 b. a plurality of casings positioned around the drill string to define
5 a plurality of annuli therebetween;
- 6 c. fluid flowing down some of the plurality of annuli and returning
7 up at least one common return annulus, for defining a frictional component
8 within the system to restrict the return fluid flow sufficiently to control the
9 well.

1 7. The system in claim 6, wherein the oil and gas well may be a
2 straight, directional or multilateral well.